I CLAIM AS MY INVENTION:

1. An X-ray apparatus comprising:

an x-ray imaging system comprising a carrier support with an x-ray source and a radiation detector mounted thereon at respective positions allowing an examination subject to be disposed between the x-ray source and the radiation detector;

a supporting arrangement for said carrier support for moving said carrier support relative to the examination subject for acquiring a series of 2D projections of the examination subject with the x-ray source and the radiation detector;

an optical 3D sensor mounted to said carrier support; and

said supporting arrangement for said carrier support also moving said carrier support relative to said examination subject for acquiring an image dataset with said optical 3D sensor representing at least a portion of a surface of the examination subject.

2. An X-ray apparatus as claimed in claim 1, wherein said carrier support is a C-arm.

3. An X-ray apparatus as claimed in claim 2, wherein said C-arm has a circumference, and wherein said supporting arrangement moves said C-arm along said circumference during acquisition of said series of 2D projections.

4. An X-ray apparatus as claimed in claim 2, wherein said supporting arrangement moves said C-arm through an angulation movement for acquiring said series of 2D projections.

5. An X-ray apparatus as claimed in claim 2 wherein said C-arm and said supporting arrangement form an isocentric apparatus.

6. An X-ray apparatus as claimed in claim 1 comprising a computer supplied with said series of 2D projections for calculating a volume dataset of the body of the examination subject, and for combining said image dataset with said volume dataset by a combination procedure selected from the group consisting of fusing and superimposing.

7. A method comprising the steps of:

disposing an examination subject in an x-ray imaging system comprising a carrier support with an x-ray source and a radiation detector mounted thereon at respective positions allowing the examination subject to be disposed between the x-ray source and the radiation detector;

moving said carrier support relative to the examination subject for acquiring a series of 2D projections of the examination subject with the x-ray source and the radiation detector; and

with an optical 3D sensor mounted to said carrier support, also moving said carrier support relative to said examination subject for acquiring an image dataset with said optical 3D sensor representing at least a portion of a surface of the examination subject.

8. A method as claimed in claim 7, comprising employing a C-arm as said carrier support.

9. A method as claimed in claim 8, wherein said C-arm has a circumference, and comprising moving said C-arm along said circumference during acquisition of said series of 2D projections.

10. A method as claimed in claim 8, comprising moving said C-arm through an angulation movement for acquiring said series of 2D projections.

11. A method as claimed in claim 8 wherein said C-arm and said supporting arrangement form an isocentric apparatus.

12. A method as claimed in claim 7 comprising supplying a computer with said series of 2D projections and, in said computer, calculating a volume dataset of the body of the examination subject, and for combining said image dataset with said volume dataset by a combination procedure selected from the group consisting of fusing and superimposing.